

111TH CONGRESS
2D SESSION

S. 3495

To promote the deployment of plug-in electric drive vehicles, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 15, 2010

Mr. DORGAN (for himself and Mr. MERKLEY) introduced the following bill;
which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To promote the deployment of plug-in electric drive vehicles,
and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Promoting Electric Ve-
5 hicles Act of 2010”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

8 (1) the United States is the largest consumer of
9 petroleum in the world, consuming 19,500,000 bar-
10 rels per day of petroleum products during 2008;

1 (2) high and volatile international oil prices rep-
2 resent a significant and ongoing threat to the eco-
3 nomic and national security of the United States;

4 (3) many of the nations on which the United
5 States relies for petroleum supplies or that signifi-
6 cantly affect the world petroleum market share nei-
7 ther the national interest nor the values of the
8 United States;

9 (4) the United States imports more than 50
10 percent of the petroleum needs of the country each
11 day;

12 (5) in 2008, the net deficit of the United States
13 in petroleum trade amounted to more than
14 \$380,000,000,000, or nearly 60 percent of the total
15 trade deficit;

16 (6) the transportation sector of the United
17 States accounts for over $\frac{2}{3}$ of total national petro-
18 leum consumption and is 94 percent reliant on pe-
19 troleum;

20 (7) the electrification of the transportation sec-
21 tor represents a direct pathway to significant reduc-
22 tion in petroleum dependence, because passenger
23 cars and light trucks account for more than 60 per-
24 cent of the transportation petroleum demand and

1 more than 40 percent of total petroleum demand in
2 the United States;

3 (8) the electrification of the transportation sec-
4 tor promotes national energy security because the
5 electric power sector uses a diverse range of domes-
6 tic electricity generation sources;

7 (9) electric drive vehicles, when running on elec-
8 tric power, produce no tailpipe emissions;

9 (10) the deployment of 700,000 plug-in electric
10 drive vehicles would result in a petroleum savings of
11 approximately 10,000,000 barrels per year compared
12 to the annual petroleum consumption as of the date
13 of enactment of this Act;

14 (11) in 2030, the United States could feasibly
15 deploy more than 100,000,000 plug-in electric drive
16 vehicles, which would result in a petroleum savings
17 of more than 1,000,000,000 barrels of petroleum per
18 year and greenhouse gas reductions of over
19 300,000,000 tons of carbon dioxide compared to the
20 annual petroleum consumption and greenhouse gas
21 emissions as of the date of enactment of this Act;
22 and

23 (12) a targeted deployment program for plug-in
24 electric drive vehicles that is focused on competi-
25 tively selected deployment communities—

1 (A) is a critical component of a com-
2 prehensive effort to speed plug-in electric drive
3 vehicle penetration rates;

4 (B) will contribute to the larger national
5 effort to deploy plug-in electric drive vehicles;

6 (C) will inform best practices for the wide-
7 scale deployment of plug-in electric drive vehi-
8 cles; and

9 (D) will substantially reduce the oil con-
10 sumption of the United States.

11 **SEC. 3. DEFINITIONS.**

12 In this Act:

13 (1) AGENCY.—The term “agency” has the
14 meaning given the term “Executive agency” in sec-
15 tion 105 of title 5, United States Code.

16 (2) CHARGING INFRASTRUCTURE.—The term
17 “charging infrastructure” means any property (not
18 including a building or the structural components of
19 a building) if the property is used for the recharging
20 of motor vehicles propelled by electricity, including
21 electrical panel upgrades, wiring, conduit, trenching,
22 pedestals, and related equipment.

23 (3) COMMITTEE.—The term “Committee”
24 means the Plug-in Electric Drive Vehicle Technical
25 Advisory Committee established by section 304.

1 (4) DEPLOYMENT COMMUNITY.—The term “de-
2 ployment community” means a community selected
3 by the Secretary to be part of the targeted plug-in
4 electric drive vehicles deployment communities pro-
5 gram under section 106.

6 (5) ELECTRIC UTILITY.—The term “electric
7 utility” has the meaning given the term in section
8 3 of the Public Utility Regulatory Policies Act of
9 1978 (16 U.S.C. 2602).

10 (6) FEDERAL-AID SYSTEM OF HIGHWAYS.—The
11 term “Federal-aid system of highways” means a
12 highway system described in section 103 of title 23,
13 United States Code.

14 (7) PLUG-IN ELECTRIC DRIVE VEHICLE.—

15 (A) IN GENERAL.—The term “plug-in elec-
16 tric drive vehicle” has the meaning given the
17 term in section 131(a)(5) of the Energy Inde-
18 pendence and Security Act of 2007 (42 U.S.C.
19 17011(a)(5)).

20 (B) INCLUSIONS.—The term “plug-in elec-
21 tric drive vehicle” includes—

22 (i) a low speed plug-in electric drive
23 vehicles that meet the Federal Motor Vehi-
24 cle Safety Standards described in section

1 571.500 of title 49, Code of Federal Regu-
2 lations (or successor regulations); and

3 (ii) any other motor vehicles that can
4 be recharged from an external source of
5 motive power and that is authorized to
6 travel on the Federal-aid system of high-
7 ways.

8 (8) PRIZE.—The term “Prize” means the Ad-
9 vanced Batteries for Tomorrow Prize established by
10 section 202.

11 (9) SECRETARY.—The term “Secretary” means
12 the Secretary of Energy.

13 (10) TASK FORCE.—The term “Task Force”
14 means the Plug-in Electric Drive Vehicle Inter-
15 agency Task Force established by section 305.

16 **TITLE I—NATIONAL PLUG-IN**
17 **ELECTRIC DRIVE VEHICLE**
18 **DEPLOYMENT PROGRAM.**

19 **SEC. 101. NATIONAL PLUG-IN ELECTRIC DRIVE VEHICLE**
20 **DEPLOYMENT PROGRAM.**

21 (a) IN GENERAL.—There is established within the
22 Department of Energy a national plug-in electric drive ve-
23 hicle deployment program for the purpose of assisting in
24 the deployment of plug-in electric drive vehicles.

1 (b) GOALS.—The goals of the national program de-
2 scribed in subsection (a) include—

3 (1) the reduction and displacement of petro-
4 leum use by accelerating the deployment of plug-in
5 electric drive vehicles in the United States;

6 (2) the reduction of greenhouse gas emissions
7 by accelerating the deployment of plug-in electric
8 drive vehicles in the United States;

9 (3) the facilitation of the rapid deployment of
10 plug-in electric drive vehicles;

11 (4) the achievement of significant market pene-
12 trations by plug-in electric drive vehicles nationally;

13 (5) the establishment of models for the rapid
14 deployment of plug-in electric drive vehicles nation-
15 ally, including models for the deployment of residen-
16 tial, private, and publicly available charging infra-
17 structure;

18 (6) the increase of consumer knowledge and ac-
19 ceptance of plug-in electric drive vehicles;

20 (7) the encouragement of the innovation and in-
21 vestment necessary to achieve mass market deploy-
22 ment of plug-in electric drive vehicles;

23 (8) the facilitation of the integration of plug-in
24 electric drive vehicles into electricity distribution sys-

1 tems and the larger electric grid while maintaining
2 grid system performance and reliability;

3 (9) the provision of technical assistance to com-
4 munities across the United States to prepare for
5 plug-in electric drive vehicles; and

6 (10) the support of workforce training across
7 the United States relating to plug-in electric drive
8 vehicles.

9 (c) DUTIES.—In carrying out this title, the Secretary
10 shall—

11 (1) provide technical assistance to State, local,
12 and tribal governments that want to create deploy-
13 ment programs for plug-in electric drive vehicles in
14 the communities over which the governments have
15 jurisdiction;

16 (2) perform national assessments of the poten-
17 tial deployment of plug-in electric drive vehicles;

18 (3) synthesize and disseminate data from the
19 deployment of plug-in electric drive vehicles;

20 (4) develop best practices for the successful de-
21 ployment of plug-in electric drive vehicles;

22 (5) carry out workforce training under section
23 104;

1 (6) establish the targeted plug-in electric drive
2 vehicle deployment communities program under sec-
3 tion 106; and

4 (7) in conjunction with the Task Force, make
5 recommendations to Congress and the President on
6 methods to reduce the barriers to plug-in electric
7 drive vehicle deployment.

8 (d) REPORT.—Not later than 1 year after the date
9 of enactment of this Act and biennially thereafter, the Sec-
10 retary shall submit to the appropriate committees of Con-
11 gress a report on the progress made in implementing the
12 national program described in subsection (a) that in-
13 cludes—

14 (1) a description of the progress made by—

15 (A) the technical assistance program under
16 section 103; and

17 (B) the workforce training program under
18 section 104; and

19 (2) any updated recommendations of the Sec-
20 retary for changes in Federal programs to promote
21 the purposes of this title.

22 (e) NATIONAL INFORMATION CLEARINGHOUSE.—
23 The Secretary shall make available to the public, in a
24 timely manner, information regarding—

1 (1) the cost, performance, usage data, and tech-
2 nical data regarding plug-in electric drive vehicles
3 and associated infrastructure, including information
4 from the deployment communities established under
5 section 106; and

6 (2) any other educational information that the
7 Secretary determines to be appropriate.

8 (f) AUTHORIZATION OF APPROPRIATIONS.—For the
9 period of fiscal years 2011 through 2016, there are au-
10 thorized to be appropriated \$100,000,000 to carry out sec-
11 tions 101 through 103.

12 **SEC. 102. NATIONAL ASSESSMENT AND PLAN.**

13 (a) IN GENERAL.—Not later than 1 year after the
14 date of enactment of this Act, the Secretary shall carry
15 out a national assessment and develop a national plan for
16 plug-in electric drive vehicle deployment that includes—

17 (1) an assessment of the maximum feasible de-
18 ployment of plug-in electric drive vehicles by 2020
19 and 2030;

20 (2) the establishment of national goals for mar-
21 ket penetration of plug-in electric drive vehicles by
22 2020 and 2030;

23 (3) a plan for integrating the successes and
24 barriers to deployment identified by the deployment
25 communities program established under section 106

1 to prepare communities across the Nation for the
2 rapid deployment of plug-in electric drive vehicles;

3 (4) a plan for providing technical assistance to
4 communities across the United States to prepare for
5 plug-in electric drive vehicle deployment;

6 (5) a plan for quantifying the reduction in pe-
7 troleum consumption and the net impact on green-
8 house gas emissions due to the deployment of plug-
9 in electric drive vehicles; and

10 (6) in consultation with the Task Force, any
11 recommendations to the President and to Congress
12 for changes in Federal programs (including laws,
13 regulations, and guidelines)—

14 (A) to better promote the deployment of
15 plug-in electric drive vehicles; and

16 (B) to reduce barriers to the deployment of
17 plug-in electric drive vehicles.

18 (b) UPDATES.—Not later than 2 years after the date
19 of development of the plan described in subsection (a), and
20 not less frequently than once every 2 years thereafter, the
21 Secretary shall use market data and information from the
22 targeted plug-in electric drive vehicle deployment commu-
23 nities program established under section 106 and other
24 relevant data to update the plan to reflect real world mar-
25 ket conditions.

1 **SEC. 103. TECHNICAL ASSISTANCE.**

2 (a) TECHNICAL ASSISTANCE TO STATE, LOCAL, AND
3 TRIBAL GOVERNMENTS.—

4 (1) IN GENERAL.—In carrying out this title, the
5 Secretary shall provide, at the request of the appli-
6 cable elected official, technical assistance to State,
7 local, and tribal governments to assist with the de-
8 ployment of plug-in electric drive vehicles.

9 (2) REQUIREMENTS.—The technical assistance
10 described in paragraph (1) shall include—

11 (A) training on codes and standards for
12 building and safety inspectors;

13 (B) training on best practices for expe-
14 diting permits and inspections;

15 (C) education and outreach on frequently
16 asked questions relating to the various types of
17 plug-in electric drive vehicles and associated in-
18 frastructure, battery technology, and disposal;
19 and

20 (D) the dissemination of information re-
21 garding best practices for the deployment of
22 plug-in electric drive vehicles.

23 (3) PRIORITY.—In providing technical assist-
24 ance under this subsection, the Secretary shall give
25 priority to—

26 (A) communities that—

1 (i) applied to participate in the pro-
2 gram described in section 106;

3 (ii) were determined to have strong
4 applications; and

5 (iii) were not selected to be deploy-
6 ment communities;

7 (B) communities that demonstrate engaged
8 partnerships among public and private stake-
9 holders, including—

10 (i) elected and appointed officials
11 from each of the participating State, local,
12 and tribal governments;

13 (ii) all relevant generators and dis-
14 tributors of electricity;

15 (iii) public utility commissions;

16 (iv) departments of public works and
17 transportation;

18 (v) owners and operators of property
19 that will be essential to the deployment of
20 a sufficient level of publicly available
21 charging infrastructure (including privately
22 owned parking lots or structures and com-
23 mercial entities with public access loca-
24 tions);

1 (vi) plug-in electric drive vehicle man-
2 ufacturers or retailers;

3 (vii) third-party providers of charging
4 infrastructure or services;

5 (viii) owners of any major fleet that
6 will participate in the program;

7 (ix) as appropriate, owners and opera-
8 tors of regional electric power distribution
9 and transmission facilities; and

10 (x) other existing community coali-
11 tions recognized by the Department of En-
12 ergy;

13 (C) communities that have best dem-
14 onstrated that the public is likely to embrace
15 plug-in electric drive vehicles;

16 (D) communities that have shown a com-
17 mitment to serving diverse consumer charging
18 infrastructure needs, including the charging in-
19 frastructure needs for single- and multi-family
20 housing and public and privately owned com-
21 mercial infrastructure; and

22 (E) communities that have established reg-
23 ulatory and educational efforts to facilitate con-
24 sumer acceptance of electric drive vehicles, in-
25 cluding by—

1 (i) adopting (or being in the process
2 of adopting) streamlined permitting and
3 inspections processes for residential charg-
4 ing infrastructure; and

5 (ii) providing customer informational
6 resources, including providing plug-in elec-
7 tric drive information on community or
8 other Web sites.

9 (4) BEST PRACTICES.—The Secretary shall col-
10 lect and disseminate information to State, local, and
11 tribal governments creating plans to deploy plug-in
12 electric drive vehicles on best practices (including
13 codes and standards) that uses data from—

14 (A) the program established by section
15 106; and

16 (B) the activities carried out by the Task
17 Force.

18 (5) GRANTS.—

19 (A) IN GENERAL.—The Secretary shall es-
20 tablish a program to provide grants to State,
21 local, and tribal governments to assist the gov-
22 ernments—

23 (i) in preparing a community deploy-
24 ment plan under section 106; and

1 (ii) in preparing and implementing
2 programs that support the deployment of
3 plug-in electric drive vehicles.

4 (B) APPLICATION.—A State, local, or trib-
5 al government that seeks to receive a grant
6 under this paragraph shall submit to the Sec-
7 retary an application for the grant at such
8 time, in such form, and containing such infor-
9 mation as the Secretary may prescribe.

10 (C) USE OF FUNDS.—A State, local, or
11 tribal government receiving a grant under this
12 paragraph shall use the funds—

13 (i) to develop a community deploy-
14 ment plan that shall be submitted to the
15 next available competition under section
16 106; and

17 (ii) to carry out activities that encour-
18 age the deployment of plug-in electric drive
19 vehicles including—

20 (I) planning for and installing
21 charging infrastructure;

22 (II) updating building, zoning, or
23 parking codes and permitting or in-
24 spection processes;

1 (III) workforce training, includ-
 2 ing the training of permitting offi-
 3 cials;

4 (IV) public education described
 5 in the proposed marketing plan;

6 (V) shifting State, local, or tribal
 7 government fleets to plug-in electric
 8 drive vehicles, at a rate in excess of
 9 the existing Federal alternative fleet
 10 vehicles requirements; and

11 (VI) any other activities, as de-
 12 termined to be necessary by the Sec-
 13 retary.

14 (b) UPDATING MODEL BUILDING CODES, PERMIT-
 15 TING AND INSPECTION PROCESSES, AND ZONING OR
 16 PARKING RULES.—

17 (1) IN GENERAL.—Not later than 180 days
 18 after the date of enactment of this Act, the Sec-
 19 retary shall develop and publish—

20 (A) model building codes for the inclusion
 21 of separate circuits for charging infrastructure,
 22 as appropriate, in new construction and major
 23 renovations of private residences, buildings, or
 24 other structures that could provide publicly
 25 available charging infrastructure;

(B) model construction permitting or inspection processes that allow for the expedited installation of charging infrastructure for purchasers of plug-in electric drive vehicles (including a permitting process that allows a vehicle purchaser to have charging infrastructure installed not later than 1 week after a request); and

(C) model zoning, parking rules, or other local ordinances that—

(i) facilitate the installation of publicly available charging infrastructure, including commercial entities that provide public access to infrastructure; and

(ii) allow for access to publicly available charging infrastructure.

(2) OPTIONAL ADOPTION.—An applicant for selection for technical assistance under this section or as a deployment community under section 106 shall not be required to use the model building codes, permitting and inspection processes, or zoning, parking rules, or other ordinances included in the report under paragraph (1).

(3) SMART GRID INTEGRATION.—In developing the model codes or ordinances described in para-

1 graph (1), the Secretary shall consider smart grid
2 integration.

3 **SEC. 104. WORKFORCE TRAINING.**

4 (a) MAINTENANCE AND SUPPORT.—

5 (1) IN GENERAL.—The Secretary, in consulta-
6 tion with the Committee and the Task Force, shall
7 award grants to institutions of higher education and
8 other qualified training and education institutions
9 for the establishment of programs to provide train-
10 ing and education for vocational workforce develop-
11 ment through centers of excellence.

12 (2) PURPOSE.—Training funded under this
13 subsection shall be intended to ensure that the work-
14 force has the necessary skills needed to work on and
15 maintain plug-in electric drive vehicles and the infra-
16 structure required to support plug-in electric drive
17 vehicles.

18 (3) SCOPE.—Training funded under this sub-
19 section shall include training for—

20 (A) first responders;

21 (B) electricians and contractors who will
22 be installing infrastructure;

23 (C) engineers;

24 (D) code inspection officials; and

25 (E) dealers and mechanics.

1 (b) DESIGN.—The Secretary shall award grants to
 2 institutions of higher education and other qualified train-
 3 ing and education institutions for the establishment of
 4 programs to provide training and education in designing
 5 plug-in electric drive vehicles and associated components
 6 and infrastructure to ensure that the United States can
 7 lead the world in this field.

8 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
 9 authorized to be appropriated \$150,000,000 to carry out
 10 this section.

11 **SEC. 105. FEDERAL FLEETS.**

12 (a) IN GENERAL.—Electricity consumed by Federal
 13 agencies to fuel plug-in electric drive vehicles—

14 (1) is an alternative fuel (as defined in section
 15 301 of the Energy Policy Act of 1992 (42 U.S.C.
 16 13218)); and

17 (2) shall be accounted for under Federal fleet
 18 management reporting requirements, not under Fed-
 19 eral building management reporting requirements.

20 (b) ASSESSMENT AND REPORT.—Not later than 180
 21 days after the date of enactment of this Act and at the
 22 completion of the Program, the Federal Energy Manage-
 23 ment Program and the General Services Administration,
 24 in consultation with the Task Force, shall complete an as-
 25 sessment of Federal Government fleets, including the

1 Postal Service and the Department of Defense, and sub-
2 mit a report to Congress that describes—

3 (1) for each Federal agency, which types of ve-
4 hicles the agency uses that would or would not be
5 suitable for near-term and medium-term conversion
6 to plug-in electric drive vehicles, taking into account
7 the types of vehicles for which plug-in electric drive
8 vehicles could provide comparable functionality and
9 lifecycle costs;

10 (2) how many plug-in electric drive vehicles
11 could be deployed by the Federal Government in 5
12 years and in 10 years, assuming that plug-in electric
13 drive vehicles are available and are purchased when
14 new vehicles are needed or existing vehicles are re-
15 placed;

16 (3) the estimated cost to the Federal Govern-
17 ment for vehicle purchases under paragraph (2); and

18 (4) a description of any updates to the assess-
19 ment and plan based on new market data.

20 (c) INVENTORY AND DATA COLLECTION.—

21 (1) IN GENERAL.—In carrying out the assess-
22 ment and report under subsection (b), the Federal
23 Energy Management Program, in consultation with
24 the General Services Administration, shall—

1 (A) develop an information request for
2 each agency that operates a fleet of at least 20
3 motor vehicles; and

4 (B) establish guidelines for each agency to
5 use in developing a plan to deploy plug-in elec-
6 tric drive vehicles.

7 (2) AGENCY RESPONSES.—Each agency that
8 operates a fleet of at least 20 motor vehicles shall—

9 (A) collect information on the vehicle fleet
10 of the agency in response to the information re-
11 quest described in paragraph (1); and

12 (B) develop a plan to deploy plug-in elec-
13 tric drive vehicles.

14 (3) ANALYSIS OF RESPONSES.—The Federal
15 Energy Management Program shall—

16 (A) analyze the information submitted by
17 each agency under paragraph (2);

18 (B) approve or suggest amendments to the
19 plan of each agency to ensure that the plan is
20 consistent with the goals and requirements of
21 this Act; and

22 (C) submit a plan to Congress and the
23 General Services Administration to be used in
24 developing the pilot program described in sub-
25 section (e).

1 (d) BUDGET REQUEST.—Each agency of the Federal
2 Government shall include plug-in electric drive vehicle pur-
3 chases identified in the report under subsection (b) in the
4 budget of the agency to be included in the budget of the
5 United States Government submitted by the President
6 under section 1105 of title 31, United States Code.

7 (e) PILOT PROGRAM TO DEPLOY PLUG-IN ELECTRIC
8 DRIVE VEHICLES IN THE FEDERAL FLEET.—

9 (1) IN GENERAL.—The Administrator of Gen-
10 eral Services shall acquire plug-in electric drive vehi-
11 cles and the requisite charging infrastructure to be
12 deployed in a range of locations in the Federal fleet
13 during the 5-year period beginning on the date of
14 enactment of this Act.

15 (2) DATA COLLECTION.—The Administrator of
16 General Services shall collect data regarding—

17 (A) the cost, performance, and use of plug-
18 in electric drive vehicles in the Federal fleet;

19 (B) the deployment and integration of
20 plug-in electric drive vehicles in the Federal
21 fleet; and

22 (C) the contribution of plug-in electric
23 drive vehicles in the Federal fleet toward reduc-
24 ing the use of fossil fuels and greenhouse gas
25 emissions.

1 (3) REPORT.—Not later than 6 years after the
 2 date of enactment of this Act, the Administrator of
 3 General Services shall submit to the appropriate
 4 committees of Congress a report that—

5 (A) describes the status of plug-in electric
 6 drive vehicles in the Federal fleet; and

7 (B) includes an analysis of the data col-
 8 lected under this subsection.

9 (4) PUBLIC WEB SITE.—The Federal Energy
 10 Management Program shall maintain and regularly
 11 update a publicly available Web site that provides in-
 12 formation on the status of plug-in electric drive vehi-
 13 cles in the Federal fleet.

14 (f) AUTHORIZATION OF APPROPRIATIONS.—There is
 15 authorized to be appropriated for the Federal Government
 16 to pay for incremental costs to purchase or lease plug-
 17 in electric drive vehicles and the requisite charging infra-
 18 structure for Federal fleets \$25,000,000.

19 **SEC. 106. TARGETED PLUG-IN ELECTRIC DRIVE VEHICLE**
 20 **DEPLOYMENT COMMUNITIES PROGRAM.**

21 (a) ESTABLISHMENT.—

22 (1) IN GENERAL.—There is established within
 23 the national plug-in electric drive deployment pro-
 24 gram established under section 101 a targeted plug-

1 in electric drive vehicle deployment communities pro-
2 gram (referred to in this section as the “Program”).

3 (2) PHASE 1.—

4 (A) IN GENERAL.—The Secretary shall es-
5 tablish a competitive process to select at least
6 5 and not more than 15 phase 1 deployment
7 communities for the Program.

8 (B) ELIGIBLE ENTITIES.—In selecting
9 participants for the Program under paragraph
10 (1), the Secretary shall only consider applica-
11 tions submitted by State, tribal, or local govern-
12 ment entities (or groups of State, tribal, or
13 local government entities).

14 (C) SELECTION.—Not later than 1 year
15 after the date of enactment of this Act, the Sec-
16 retary shall select the phase 1 deployment com-
17 munities under this paragraph.

18 (D) TERMINATION.—Phase 1 of the Pro-
19 gram shall be carried out for a 5-year period
20 beginning on the date funding under this Act is
21 first provided to the deployment community.

22 (3) PHASE 2.—Not later than 5 years after the
23 date of enactment of this Act, the Secretary shall
24 submit to Congress a report that analyzes the suc-
25 cess of phase I and, if, based on the phase I anal-

1 ysis, the Secretary determines that a phase II pro-
2 gram is warranted, makes recommendations and de-
3 scribes a plan for phase II, including—

4 (A) recommendations regarding—

5 (i) the number of additional deploy-
6 ment communities that should be selected;

7 (ii) the manner in which criteria for
8 selection should be updated;

9 (iii) the manner in which incentive
10 structures for phase 2 deployment should
11 be changed; and

12 (iv) whether other forms of onboard
13 energy storage for electric drive vehicles
14 should be included in phase 2; and

15 (B) a request for appropriations to imple-
16 ment phase 2 of the Program.

17 (b) GOALS.—The goals of the Program are—

18 (1) to facilitate the rapid deployment of plug-
19 in electric drive vehicles, including—

20 (A) the deployment of 700,000 plug-in
21 electric drive vehicles in phase 1 in the deploy-
22 ment communities selected under paragraph
23 (2);

1 (B) the near-term achievement of signifi-
2 cant market penetration in deployment commu-
3 nities; and

4 (C) the achievement of significant market
5 penetration nationally;

6 (2) to establish models for the rapid deployment
7 of plug-in electric drive vehicles nationally, including
8 for the deployment of residential and publicly avail-
9 able charging infrastructure;

10 (3) to increase consumer knowledge and accept-
11 ance of plug-in electric drive vehicles;

12 (4) to encourage the innovation and investment
13 necessary to achieve mass market deployment of
14 plug-in electric drive vehicles;

15 (5) to demonstrate the integration of plug-in
16 electric drive vehicles into electricity distribution sys-
17 tems and the larger electric grid while maintaining
18 grid system performance and reliability;

19 (6) to demonstrate protocols and communica-
20 tion standards that facilitate vehicle integration into
21 the grid and provide seamless charging for con-
22 sumers traveling through multiple utility distribution
23 systems;

24 (7) to investigate differences among deployment
25 communities and to develop best practices for imple-

1 menting vehicle electrification in various commu-
 2 nities, including best practices for planning for and
 3 facilitating the construction of residential and pub-
 4 licly available infrastructure to support plug-in elec-
 5 tric drive vehicles;

6 (8) to collect comprehensive data on the pur-
 7 chase and use of plug-in electric drive vehicles to in-
 8 form best practices for rapidly deploying plug-in
 9 electric drive vehicles in other locations, including
 10 for the installation of charging infrastructure; and

11 (9) to reduce and displace petroleum use and
 12 reduce greenhouse gas emissions by accelerating the
 13 deployment of plug-in electric drive vehicles in the
 14 United States.

15 (c) PHASE 1 DEPLOYMENT COMMUNITY SELECTION
 16 CRITERIA.—

17 (1) IN GENERAL.—The Secretary shall ensure,
 18 to the maximum extent practicable, that selected de-
 19 ployment communities in phase 1 serve as models of
 20 deployment for various communities across the
 21 United States.

22 (2) SELECTION.—In selecting communities
 23 under this section, the Secretary—

24 (A) shall ensure, to the maximum extent
 25 practicable, that—

1 (i) the combination of selected com-
2 munities is diverse in population, demo-
3 graphics, urban and suburban composition,
4 typical commuting patterns, climate, and
5 type of utility (including regulated, munic-
6 ipal, cooperative, and vertically integrated
7 utilities);

8 (ii) the combination of selected com-
9 munities is diverse in geographic distribu-
10 tion, and at least 1 deployment community
11 is located in each Petroleum Administra-
12 tion for Defense District;

13 (iii) at least 1 community selected has
14 a population of less than 125,000;

15 (iv) each deployment community will
16 achieve significant market penetration; and

17 (v) the deployment communities are
18 representative of other communities across
19 the United States;

20 (B) is encouraged to select a combination
21 of deployment communities that includes mul-
22 tiple models or approaches for deploying plug-
23 in electric drive vehicles that the Secretary be-
24 lieves are reasonably likely to be effective, in-

cluding multiple approaches to the deployment of charging infrastructure; and

(C) in addition to the criteria described in subparagraph (A), may give preference to applicants proposing a greater non-Federal cost share.

(3) CRITERIA.—

(A) IN GENERAL.—Not later than 120 days after the date of enactment of this Act, the Secretary shall publish criteria for the selection of deployment communities that include requirements that applications be submitted by a State, tribal, or local government entity (or groups of State, tribal, or local government entities).

(B) APPLICATION REQUIREMENTS.—The criteria published by the Secretary under subparagraph (A) shall include application requirements that, at a minimum, include—

(i) goals for—

(I) the number of plug-in electric drive vehicles to be deployed in the community;

(II) the expected percentage of light-duty vehicle sales that would be

1 sales of plug-in electric drive vehicles;
2 and

3 (III) the adoption of plug-in elec-
4 tric drive vehicles (including medium-
5 or heavy-duty vehicles) in private and
6 public fleets during the 5-year dura-
7 tion of the Program;

8 (ii) evidence that—

9 (I) the public is likely to embrace
10 plug-in electric drive vehicles; and

11 (II) automobile manufacturers
12 and dealers will be able to provide and
13 service the targeted number of plug-in
14 electric drive vehicles in the commu-
15 nity for the duration of the program;

16 (iii) clearly defined geographic bound-
17 aries of the proposed deployment area;

18 (iv) a community deployment plan for
19 the deployment of plug-in electric drive ve-
20 hicles, charging infrastructure, and serv-
21 ices in the deployment community;

22 (v) assurances that a majority of the
23 vehicle deployments anticipated in the plan
24 will be for personal vehicles authorized to
25 travel on the United States Federal-aid

1 system of highways, but may also in-
2 clude—

3 (I) private or public sector plug-
4 in electric drive fleet vehicles;

5 (II) medium- and heavy-duty
6 plug-in hybrid vehicles;

7 (III) low speed plug-in electric
8 drive vehicles that meet Federal
9 Motor Vehicle Safety Standards de-
10 scribed in section 571.500 of title 49,
11 Code of Federal Regulations; and

12 (IV) any other plug-in electric
13 drive vehicle authorized to travel on
14 the United States Federal-aid system
15 of highways; and

16 (vi) any other merit-based criteria, as
17 determined by the Secretary.

18 (4) COMMUNITY DEPLOYMENT PLANS.—Plans
19 for the deployment of plug-in electric drive vehicles
20 shall include—

21 (A) a proposed level of cost sharing in ac-
22 cordance with subsection (d)(2)(C);

23 (B) documentation demonstrating a sub-
24 stantial partnership with relevant stakeholders,
25 including—

1 (i) a list of stakeholders that in-
2 cludes—

3 (I) elected and appointed officials
4 from each of the participating State,
5 local, and tribal governments;

6 (II) all relevant generators and
7 distributors of electricity;

8 (III) State utility regulatory au-
9 thorities;

10 (IV) departments of public works
11 and transportation;

12 (V) owners and operators of
13 property that will be essential to the
14 deployment of a sufficient level of
15 publicly available charging infrastruc-
16 ture (including privately owned park-
17 ing lots or structures and commercial
18 entities with public access locations);

19 (VI) plug-in electric drive vehicle
20 manufacturers or retailers;

21 (VII) third-party providers of
22 residential, private, and publicly avail-
23 able charging infrastructure or serv-
24 ices;

1 (VIII) owners of any major fleet
2 that will participate in the program;

3 (IX) as appropriate, owners and
4 operators of regional electric power
5 distribution and transmission facili-
6 ties; and

7 (X) as appropriate, other existing
8 community coalitions recognized by
9 the Department of Energy;

10 (ii) evidence of the commitment of the
11 stakeholders to participate in the partner-
12 ship;

13 (iii) a clear description of the role and
14 responsibilities of each stakeholder; and

15 (iv) a plan for continuing the engage-
16 ment and participation of the stakeholders,
17 as appropriate, throughout the implemen-
18 tation of the deployment plan;

19 (C) a description of the number of plug-in
20 electric drive vehicles anticipated to be plug-in
21 electric drive personal vehicles and the number
22 of plug-in electric drive vehicles anticipated to
23 be privately owned fleet or public fleet vehicles;

1 (D) a plan for deploying residential, pri-
2 vate, and publicly available charging infrastruc-
3 ture, including—

4 (i) an assessment of the number of
5 consumers who will have access to private
6 residential charging infrastructure;

7 (ii) options for accommodating plug-in
8 electric drive vehicle owners who are not
9 able to charge vehicles at their place of
10 residence;

11 (iii) a plan for ensuring that the
12 charging infrastructure be able to send and
13 receive the information needed to interact
14 with the grid and be compatible with smart
15 grid technologies to the extent feasible;

16 (iv) an estimate of the number and
17 dispersion of publicly and privately owned
18 charging stations that will be publicly or
19 commercially available;

20 (v) an estimate of the quantity of
21 charging infrastructure that will be pri-
22 vately funded or located on private prop-
23 erty; and

24 (vi) a description of equipment to be
25 deployed, including assurances that, to the

1 maximum extent practicable, equipment to
2 be deployed will meet open, nonproprietary
3 standards for connecting to plug-in electric
4 drive vehicles that are either—

5 (I) commonly accepted by indus-
6 try at the time the equipment is being
7 acquired; or

8 (II) meet the standards developed
9 by the Director of the National Insti-
10 tute of Standards and Technology
11 under section 1305 of the Energy
12 Independence and Security Act of
13 2007 (42 U.S.C. 17385);

14 (E) a plan for effective marketing of and
15 consumer education relating to plug-in electric
16 drive vehicles, charging services, and infrastruc-
17 ture;

18 (F) descriptions of updated building codes
19 (or a plan to update building codes before or
20 during the grant period) to include charging in-
21 frastructure or dedicated circuits for charging
22 infrastructure, as appropriate, in new construc-
23 tion and major renovations;

24 (G) descriptions of updated construction
25 permitting or inspection processes (or a plan to

1 update construction permitting or inspection
 2 processes) to allow for expedited installation of
 3 charging infrastructure for purchasers of plug-
 4 in electric drive vehicles, including a permitting
 5 process that allows a vehicle purchaser to have
 6 charging infrastructure installed within 1 week;

7 (H) descriptions of updated zoning, park-
 8 ing rules, or other local ordinances as are nec-
 9 essary to facilitate the installation of publicly
 10 available charging infrastructure and to allow
 11 for access to publicly available charging infra-
 12 structure, as appropriate;

13 (I) a plan to ensure that each resident in
 14 a deployment community who purchases and
 15 registers a new plug-in electric drive vehicle
 16 throughout the duration of the deployment com-
 17 munity receives a minimum of \$2,500 in con-
 18 sumer benefits, in addition to any Federal in-
 19 centives, that may include—

20 (i) a rebate of part of the purchase
 21 price of the vehicle;

22 (ii) reductions in sales taxes or reg-
 23 istration fees;

24 (iii) rebates or reductions in the costs
 25 of permitting, purchasing, or installing

1 home plug-in electric drive vehicle charging
2 infrastructure; and

3 (iv) rebates or reductions in State or
4 local toll road access charges;

5 (J) additional consumer benefits, such as
6 preferred parking spaces or single-rider access
7 to high-occupancy vehicle lanes for plug-in elec-
8 tric drive vehicles;

9 (K) a proposed plan for making necessary
10 utility and grid upgrades, including economi-
11 cally sound information technology upgrades
12 and a plan for recovering the cost of the up-
13 grades;

14 (L) a description of utility, grid operator,
15 or third-party charging service provider, policies
16 and plans for accommodating the deployment of
17 plug-in electric drive vehicles, including—

18 (i) rate structures or provisions and
19 billing protocols for the charging of plug-
20 in electric drive vehicles;

21 (ii) analysis of potential impacts to
22 the grid;

23 (iii) plans for using information tech-
24 nology or third-party aggregators to mini-

1 mize the effects of charging on peak loads;
 2 and

3 (iv) plans for working with smart grid
 4 technologies or third-party aggregators for
 5 the purposes of smart charging and for al-
 6 lowing 2-way communication and elec-
 7 tricity movement;

8 (M) a deployment timeline;

9 (N) a plan for monitoring and evaluating
 10 the implementation of the plan, including
 11 metrics for assessing the success of the deploy-
 12 ment and an approach to updating the plan, as
 13 appropriate; and

14 (O) a description of the manner in which
 15 any grant funds applied for under subsection
 16 (d) will be used and the proposed local cost
 17 share for the funds.

18 (d) PHASE 1 APPLICATIONS AND GRANTS.—

19 (1) IN GENERAL.—Not later than 120 days
 20 after the date of publication by the Secretary of the
 21 selection criteria described in subsection (c)(3), any
 22 State, tribe, or local government, or group of State,
 23 tribe, or local governments may apply to the Sec-
 24 retary to become a deployment community.

25 (2) GRANTS.—

1 (A) IN GENERAL.—In each application, the
2 applicant may request up to \$500,000,000 in fi-
3 nancial assistance from the Secretary to fund
4 projects in the deployment community.

5 (B) USE OF FUNDS.—Funds provided
6 through a grant under this paragraph may be
7 used to help implement the plan for the deploy-
8 ment of plug-in electric drive vehicles included
9 in the application, including—

10 (i) planning for and installing charg-
11 ing infrastructure, including offering addi-
12 tional incentives as described in subsection
13 (c)(4)(I);

14 (ii) updating building codes, zoning or
15 parking rules, or permitting or inspection
16 processes as described in subparagraphs
17 (F), (G), and (H) of subsection (c)(4);

18 (iii) reducing the cost and increasing
19 the consumer adoption of plug-in electric
20 drive vehicles through incentives as de-
21 scribed in subsection (c)(4)(I);

22 (iv) workforce training, including
23 training of permitting officials;

1 (v) public education and marketing
2 described in the proposed marketing plan;
3 and

4 (vi) shifting State, tribal, or local gov-
5 ernment fleets to plug-in electric drive ve-
6 hicles, at a rate in excess of the existing
7 Federal alternative fleet vehicle require-
8 ments.

9 (C) COST-SHARING.—

10 (i) IN GENERAL.—A grant provided
11 under this paragraph shall be subject to a
12 minimum non-Federal cost-sharing re-
13 quirement of 20 percent.

14 (ii) NON-FEDERAL SOURCES.—The
15 Secretary shall—

16 (I) determine the appropriate
17 cost share for each selected applicant;
18 and

19 (II) require that not less than 20
20 percent of the cost of an activity fund-
21 ed by a grant under this paragraph be
22 provided by a non-Federal source.

23 (iii) REDUCTION.—The Secretary may
24 reduce or eliminate the cost-sharing re-

1 requirement described in clause (i), as the
 2 Secretary determines to be necessary.

3 (iv) CALCULATION OF AMOUNT.—In
 4 calculating the amount of the non-Federal
 5 share under this section, the Secretary—

6 (I) may include allowable costs in
 7 accordance with the applicable cost
 8 principles, including—

9 (aa) cash;

10 (bb) personnel costs;

11 (cc) the value of a service,
 12 other resource, or third party in-
 13 kind contribution determined in
 14 accordance with the applicable
 15 circular of the Office of Manage-
 16 ment and Budget;

17 (dd) indirect costs or facili-
 18 ties and administrative costs; or

19 (ee) any funds received
 20 under the power program of the
 21 Tennessee Valley Authority or
 22 any Power Marketing Adminis-
 23 tration (except to the extent that
 24 such funds are made available

1 under an annual appropriation
2 Act);

3 (II) shall include contributions
4 made by State, tribal, or local govern-
5 ment entities and private entities; and

6 (III) shall not include—

7 (aa) revenues or royalties
8 from the prospective operation of
9 an activity beyond the time con-
10 sidered in the grant;

11 (bb) proceeds from the pro-
12 spective sale of an asset of an ac-
13 tivity; or

14 (cc) other appropriated Fed-
15 eral funds.

16 (v) REPAYMENT OF FEDERAL
17 SHARE.—The Secretary shall not require
18 repayment of the Federal share of a cost-
19 shared activity under this section as a con-
20 dition of providing a grant.

21 (vi) TITLE TO PROPERTY.—The re-
22 ceipt of Federal funds under this section
23 shall not prohibit the purchaser of a vehi-
24 cle, equipment, or other property from re-
25 taining sole, permanent title to the vehicle,

1 equipment, or property at the conclusion of
2 the program.

3 (3) SELECTION.—Not later than 120 days after
4 the application deadline established under paragraph
5 (1), the Secretary shall announce the names of the
6 deployment communities selected under this sub-
7 section.

8 (e) REPORTING REQUIREMENTS.—

9 (1) IN GENERAL.—The Secretary, in consulta-
10 tion with the Committee, shall—

11 (A) determine what data will be required
12 to be collected by participants in deployment
13 communities and submitted to the Department
14 to allow for analysis of the deployment commu-
15 nities; and

16 (B) develop metrics to determine the suc-
17 cess of the deployment communities.

18 (2) PROVISION OF DATA.—As a condition of
19 participation in the Program, a deployment commu-
20 nity shall provide any data identified by the Sec-
21 retary under paragraph (1).

22 (3) REPORTS.—Not later than 3 years after the
23 date of enactment of this Act and again after the
24 completion of the Program, the Secretary shall sub-
25 mit to Congress a report that contains—

- 1 (A) a description of the status of—
2 (i) the deployment communities and
3 the implementation of the deployment plan
4 of each deployment community;
5 (ii) the rate of vehicle manufacturing
6 deployment and market penetration of
7 plug-in electric drive vehicles; and
8 (iii) the deployment of residential and
9 publicly available infrastructure;
10 (B) a description of the challenges experi-
11 enced and lessons learned from the program to
12 date, including the activities described in sub-
13 paragraph (A); and
14 (C) an analysis of the data collected under
15 this subsection.
- 16 (f) PROPRIETARY INFORMATION.—The Secretary
17 shall, as appropriate, provide for the protection of propri-
18 etary information and intellectual property rights.
- 19 (g) AUTHORIZATION OF APPROPRIATIONS.—There is
20 authorized to be appropriated to carry out this section
21 \$4,000,000,000.
- 22 (h) CONFORMING AMENDMENT.—Section 166(b)(5)
23 of title 23, United States Code, is amended—

1 (1) in subparagraph (A), by striking “Before
 2 September 30, 2009, the State” and inserting “The
 3 State”; and

4 (2) in subparagraph (B), by striking “Before
 5 September 30, 2009, the State” and inserting “The
 6 State”.

7 **TITLE II—RESEARCH AND** 8 **DEVELOPMENT**

9 **SEC. 201. RESEARCH AND DEVELOPMENT PROGRAM.**

10 (a) RESEARCH AND DEVELOPMENT PROGRAM.—

11 (1) IN GENERAL.—The Secretary, in consulta-
 12 tion with the Committee, shall establish a program
 13 to fund research and development in advanced bat-
 14 teries, plug-in electric drive vehicle components,
 15 plug-in electric drive infrastructure, and other tech-
 16 nologies supporting the development, manufacture,
 17 and deployment of plug-in electric drive vehicles and
 18 charging infrastructure.

19 (2) USE OF FUNDS.—The program may include
 20 funding for—

21 (A) the development of low-cost, smart-
 22 charging and vehicle-to-grid connectivity tech-
 23 nology;

1 (B) the benchmarking and assessment of
2 open software systems using nationally estab-
3 lished evaluation criteria; and

4 (C) new technologies in electricity storage
5 for vehicles.

6 (3) REPORT.—Not later than 4 years after the
7 date of enactment of this Act, the Secretary shall
8 submit to Congress a report describing the status of
9 the program described in paragraph (1).

10 (b) SECONDARY USE APPLICATIONS PROGRAM.—

11 (1) IN GENERAL.—The Secretary, in consulta-
12 tion with the Committee, shall carry out a research,
13 development, and demonstration program that builds
14 upon any work carried out under section 915 of the
15 Energy Policy Act of 2005 (42 U.S.C. 16195) and—

16 (A) identifies possible uses of a vehicle bat-
17 tery after the useful life of the battery in a ve-
18 hicle has been exhausted;

19 (B) assesses the potential for markets for
20 uses described in subparagraph (A) to develop,
21 as well as any barriers to the development of
22 the markets; and

23 (C) identifies the potential uses of a vehicle
24 battery—

1 (i) with the most promise for market
2 development; and

3 (ii) for which market development
4 would be aided by a demonstration project.

5 (2) REPORT.—Not later than 2 years after the
6 date of enactment of this Act, the Secretary shall
7 submit to the appropriate committees of Congress
8 an initial report on the findings of the program de-
9 scribed in paragraph (1), including recommendations
10 for stationary energy storage and other potential ap-
11 plications for batteries used in plug-in electric drive
12 vehicles.

13 (c) SECONDARY USE DEMONSTRATION PROJECTS.—

14 (1) IN GENERAL.—Based on the results of the
15 program described in subsection (b), the Secretary,
16 in consultation with the Committee, shall develop
17 guidelines for projects that demonstrate the sec-
18 ondary uses of vehicle batteries.

19 (2) PUBLICATION OF GUIDELINES.—Not later
20 than 30 months after the date of enactment of this
21 Act, the Secretary shall—

22 (A) publish the guidelines described in
23 paragraph (1); and

24 (B) solicit applications for funding for
25 demonstration projects.

1 (3) GRANT PROGRAM.—Not later than 38
2 months after the date of enactment of this Act, the
3 Secretary shall select proposals for grant funding
4 under this section, based on an assessment of which
5 proposals are mostly likely to contribute to the devel-
6 opment of a secondary market for batteries.

7 (d) MATERIALS RECYCLING STUDY.—

8 (1) IN GENERAL.—The Secretary, in consulta-
9 tion with the Committee, shall carry out a study on
10 the recycling of materials from plug-in electric drive
11 vehicles and the batteries used in plug-in electric
12 drive vehicles.

13 (2) REPORT.—Not later than 2 years after the
14 date of enactment of this Act, the Secretary shall
15 submit to the appropriate committees of Congress a
16 report on the findings of the study described in
17 paragraph (1).

18 (e) AUTHORIZATION OF APPROPRIATIONS.—There is
19 authorized to be appropriated to carry out this section
20 \$1,535,000,000, including—

21 (1) \$1,500,000,000 for use in conducting the
22 program described in subsection (a) for fiscal years
23 2011 through 2020;

1 (2) \$5,000,000 for use in conducting the pro-
2 gram described in subsection (b) for fiscal years
3 2011 through 2016;

4 (3) \$25,000,000 for use in providing grants de-
5 scribed in subsection (c) for fiscal years 2011
6 through 2020; and

7 (4) \$5,000,000 for use in conducting the study
8 described in subsection (d) for fiscal years 2011
9 through 2013.

10 **SEC. 202. ADVANCED BATTERIES FOR TOMORROW PRIZE.**

11 (a) IN GENERAL.—Not later than 1 year after the
12 date of enactment of this Act, as part of the program de-
13 scribed in section 1008 of the Energy Policy Act of 2005
14 (42 U.S.C. 16396), the Secretary shall establish the Ad-
15 vanced Batteries for Tomorrow Prize to competitively
16 award cash prizes in accordance with this section to ad-
17 vance the research, development, demonstration, and com-
18 mercial application of a 500-mile vehicle battery.

19 (b) BATTERY SPECIFICATIONS.—

20 (1) IN GENERAL.—To be eligible for the Prize,
21 a battery submitted by an entrant shall be—

22 (A) able to power a plug-in electric drive
23 vehicle authorized to travel on the United
24 States Federal-aid system of highways for at
25 least 500 miles before recharging;

1 (B) of a size that would not be cost-prohib-
2 itive or create space constraints, if mass-pro-
3 duced; and

4 (C) cost-effective (measured in cost per kil-
5 owatt hour), if mass-produced.

6 (2) ADDITIONAL REQUIREMENTS.—The Sec-
7 retary, in consultation with the Committee, shall es-
8 tablish any additional battery specifications that the
9 Secretary and the Committee determine to be nec-
10 essary.

11 (c) PRIVATE FUNDS.—

12 (1) IN GENERAL.—Subject to paragraph (2)
13 and notwithstanding section 3302 of title 31, United
14 States Code, the Secretary may accept, retain, and
15 use funds contributed by any person, government
16 entity, or organization for purposes of carrying out
17 this subsection—

18 (A) without further appropriation; and

19 (B) without fiscal year limitation.

20 (2) RESTRICTION ON PARTICIPATION.—An enti-
21 ty providing private funds for the Prize may not
22 participate in the competition for the Prize.

23 (d) TECHNICAL REVIEW.—The Secretary, in con-
24 sultation with the Committee, shall establish a technical
25 review committee composed of non-Federal officers to re-

1 view data submitted by Prize entrants under this section
 2 and determine whether the data meets the prize specifica-
 3 tions described in subsection (b).

4 (e) THIRD PARTY ADMINISTRATION.—The Secretary
 5 may select, on a competitive basis, a third party to admin-
 6 ister awards provided under this section.

7 (f) ELIGIBILITY.—To be eligible for an award under
 8 this section—

9 (1) in the case of a private entity, the entity
 10 shall be incorporated in and maintain a primary
 11 place of business in the United States; and

12 (2) in the case of an individual (whether par-
 13 ticipating as a single individual or in a group), the
 14 individual shall be a citizen or lawful permanent
 15 resident of the United States.

16 (g) AWARD AMOUNTS.—

17 (1) IN GENERAL.—Subject to the availability of
 18 funds to carry out this section, the amount of the
 19 Prize shall be \$10,000,000.

20 (2) BREAKTHROUGH ACHIEVEMENT AWARDS.—

21 In addition to the award described in paragraph (1),
 22 the Secretary, in consultation with the technical re-
 23 view committee established under subsection (d),
 24 may award cash prizes, in amounts determined by
 25 the Secretary, in recognition of breakthrough

1 achievements in research, development, demonstra-
2 tion, and commercial application of—

3 (A) activities described in subsection (b);

4 or

5 (B) advances in battery durability, energy
6 density, and power density.

7 (h) 500-MILE BATTERY AWARD FUND.—

8 (1) ESTABLISHMENT.—There is established in
9 the Treasury of the United States a fund to be
10 known as the “500-mile Battery Fund” (referred to
11 in this section as the “Fund”), to be administered
12 by the Secretary, to be available without fiscal year
13 limitation and subject to appropriation, to award
14 amounts under this section.

15 (2) TRANSFERS TO FUND.—The Fund shall
16 consist of—

17 (A) such amounts as are appropriated to
18 the Fund under subsection (i); and

19 (B) such amounts as are described in sub-
20 section (c) and that are provided for the Fund.

21 (3) PROHIBITION.—Amounts in the Fund may
22 not be made available for any purpose other than a
23 purposes described in subsection (a).

24 (4) ANNUAL REPORTS.—

1 (A) IN GENERAL.—Not later than 60 days
2 after the end of each fiscal year beginning with
3 fiscal year 2012, the Secretary shall submit a
4 report on the operation of the Fund during the
5 fiscal year to—

6 (i) the Committees on Appropriations
7 of the House of Representatives and of the
8 Senate;

9 (ii) the Committee on Energy and
10 Natural Resources of the Senate; and

11 (iii) the Committee on Energy and
12 Commerce of the House of Representa-
13 tives.

14 (B) CONTENTS.—Each report shall in-
15 clude, for the fiscal year covered by the report,
16 the following:

17 (i) A statement of the amounts depos-
18 ited into the Fund.

19 (ii) A description of the expenditures
20 made from the Fund for the fiscal year, in-
21 cluding the purpose of the expenditures.

22 (iii) Recommendations for additional
23 authorities to fulfill the purpose of the
24 Fund.

1 (iv) A statement of the balance re-
 2 maining in the Fund at the end of the fis-
 3 cal year.

4 (5) SEPARATE APPROPRIATIONS ACCOUNT.—
 5 Section 1105(a) of title 31, United States Code, is
 6 amended—

7 (A) by redesignating paragraphs (35) and
 8 (36) as paragraphs (36) and (37), respectively;

9 (B) by redesignating the second paragraph
 10 (33) (relating to obligational authority and out-
 11 lays requested for homeland security) as para-
 12 graph (35); and

13 (C) by adding at the end the following:

14 “(38) a separate statement for the 500-mile
 15 Battery Fund established under section 8(h) of the
 16 ‘Promoting Electric Vehicles Act of 2010’, which
 17 shall include the estimated amount of deposits into
 18 the Fund, obligations, and outlays from the Fund.”.

19 (i) AUTHORIZATION OF APPROPRIATIONS.—There is
 20 authorized to be appropriated—

21 (1) \$10,000,000 to carry out subsection (g)(1);

22 and

23 (2) \$1,000,000 to carry out subsection (g)(2).

1 **SEC. 203. STUDY ON THE SUPPLY OF RAW MATERIALS.**

2 (a) IN GENERAL.—The Secretary of the Interior, in
3 consultation with the Secretary and the Task Force, shall
4 conduct a study that—

5 (1) identifies the raw materials needed for the
6 manufacture of plug-in electric drive vehicles, bat-
7 teries, and other components for plug-in electric
8 drive vehicles, and for the infrastructure needed to
9 support plug-in electric drive vehicles;

10 (2) describes the primary or original sources
11 and known reserves and resources of those raw ma-
12 terials;

13 (3) assesses, in consultation with the National
14 Academy of Sciences, the degree of risk to the man-
15 ufacture, maintenance, deployment, and use of plug-
16 in electric drive vehicles associated with the supply
17 of those raw materials; and

18 (4) identifies pathways to securing reliable and
19 resilient supplies of those raw materials.

20 (b) REPORT.—Not later than 3 years after the date
21 of enactment of this Act, the Secretary of the Interior
22 shall submit to Congress a report that describes the re-
23 sults of the study.

24 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
25 authorized to be appropriated to carry out this subsection
26 \$1,500,000.

1 **SEC. 204. STUDY ON THE COLLECTION, PRESERVATION,**
2 **AND ACCESS TO DATA COLLECTED FROM**
3 **PLUG-IN ELECTRIC DRIVE VEHICLES.**

4 (a) IN GENERAL.—Not later than 90 days after the
5 date of enactment of this Act, the Secretary, in consulta-
6 tion with the Committee, shall enter into an agreement
7 with the National Academy of Sciences under which the
8 Academy shall conduct a study that—

9 (1) identifies—

10 (A) the data that may be collected from
11 plug-in electric drive vehicles, including data on
12 the location, charging patterns, and usage of
13 plug-in electric drive vehicles;

14 (B) the scientific, economic, commercial,
15 security, and historic potential of the data de-
16 scribed in subparagraph (A); and

17 (C) any laws or regulations that relate to
18 the data described in subparagraph (A); and

19 (2) analyzes and provides recommendations on
20 matters that include procedures, technologies, and
21 rules relating to—

22 (A) the collection, storage, and preserva-
23 tion of the data described in paragraph (1)(A);

24 (B) ownership of the data described in
25 paragraph (1)(A);

1 (C) access to the data described in para-
 2 graph (1)(A); and

3 (D) informed consent and privacy protec-
 4 tions for owners and users of plug-in electric
 5 drive vehicles.

6 (b) REPORT.—Not later than 15 months after the
 7 date of an agreement between the Secretary and the Acad-
 8 emy under subsection (a), the National Academy of
 9 Sciences shall submit to the appropriate committees of
 10 Congress a report that describes the results of the study
 11 under subsection (a).

12 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
 13 authorized to be appropriated to carry out this section
 14 \$1,000,000.

15 **TITLE III—MISCELLANEOUS**

16 **SEC. 301. UTILITY PLANNING FOR PLUG-IN ELECTRIC** 17 **DRIVE VEHICLES.**

18 (a) IN GENERAL.—The Public Utility Regulatory
 19 Policies Act of 1978 (16 U.S.C. 2601 et seq.) is amend-
 20 ed—

21 (1) in section 111(d) (16 U.S.C. 2621(d)), by
 22 adding at the end the following:

23 “(20) PLUG-IN ELECTRIC DRIVE VEHICLE
 24 PLANNING.—

1 “(A) UTILITY PLAN FOR PLUG-IN ELEC-
2 TRIC DRIVE VEHICLES.—

3 “(i) IN GENERAL.—Not later than 2
4 years after the date of enactment of this
5 paragraph, each electric utility shall de-
6 velop a plan to support the use of plug-in
7 electric drive vehicles, including medium-
8 and heavy-duty hybrid electric vehicles in
9 the service area of the electric utility.

10 “(ii) REQUIREMENTS.—A plan under
11 clause (i) shall investigate—

12 “(I) various levels of potential
13 penetration of plug-in electric drive
14 vehicles in the utility service area;

15 “(II) the potential impacts that
16 the various levels would have on dis-
17 tribution infrastructure and on the
18 operation of the transmission grid;
19 and

20 “(III) the role of third parties in
21 providing reliable and economical
22 charging services.

23 “(iii) WAIVER.—An electric utility
24 that determines that the electric utility will
25 have no meaningful penetration of plug-in

1 electric drive vehicles during the 5-year pe-
2 riod beginning on the date of enactment of
3 this paragraph may petition the Secretary
4 to waive clause (i) for 5 years.

5 “(iv) UPDATES.—

6 “(I) IN GENERAL.—Each electric
7 utility shall update the plan of the
8 electric utility every 5 years.

9 “(II) RESUBMISSION OF WAIV-
10 ER.—An electric utility that received a
11 waiver under clause (iii) and wants
12 the waiver to continue after the expi-
13 ration of the waiver shall be required
14 to resubmit the waiver.

15 “(v) EXEMPTION.—If the Secretary
16 determines that a plan required by a State
17 regulatory authority meets the require-
18 ments of this paragraph, the Secretary
19 may accept that plan and exempt the elec-
20 tric utility submitting the plan from the re-
21 quirements of clause (i).

22 “(B) SUPPORT REQUIREMENTS.—Each
23 State regulatory authority (in the case of each
24 electric utility for which the authority has rate-

1 making authority) and each municipal and co-
2 operative utility shall—

3 “(i) participate in any local plan for
4 the deployment of recharging infrastruc-
5 ture in communities located in the foot-
6 print of the authority or utility;

7 “(ii) require that charging infrastruc-
8 ture deployed is interoperable with prod-
9 ucts of all auto manufacturers to the max-
10 imum extent practicable; and

11 “(iii) consider adopting minimum re-
12 quirements for deployment of electrical
13 charging infrastructure and other appro-
14 priate requirements necessary to support
15 the use of plug-in electric drive vehicles.

16 “(C) COST RECOVERY.—Each State regu-
17 latory authority (in the case of each electric
18 utility for which the authority has ratemaking
19 authority) and each municipal and cooperative
20 utility may consider whether, and to what ex-
21 tent, to allow cost recovery for plans and imple-
22 mentation of plans.

23 “(D) DETERMINATION.—Not later than 3
24 years after the date of enactment of this para-
25 graph, each State regulatory authority (with re-

spect to each electric utility for which the authority has ratemaking authority), and each municipal and cooperative electric utility, shall complete the consideration, and shall make the determination, referred to in subsection (a) with respect to the standard established by this paragraph.”;

(2) in section 112(c) (16 U.S.C. 2622(c))—

(A) in the first sentence, by striking “Each State” and inserting the following:

“(1) IN GENERAL.—Each State”;

(B) in the second sentence, by striking “In the case” and inserting the following:

“(2) SPECIFIC STANDARDS.—

“(A) NET METERING AND FOSSIL FUEL GENERATION EFFICIENCY.—In the case”;

(C) in the third sentence, by striking “In the case” and inserting the following:

“(B) TIME-BASED METERING AND COMMUNICATIONS.—In the case”;

(D) in the fourth sentence—

(i) by striking “In the case” and inserting the following:

“(C) INTERCONNECTION.—In the case”;

and

1 (ii) by striking “paragraph (15)” and
 2 inserting “paragraph (15) of section
 3 111(d)”;

4 (E) in the fifth sentence, by striking “In
 5 the case” and inserting the following:

6 “(D) INTEGRATED RESOURCE PLANNING,
 7 RATE DESIGN MODIFICATIONS, SMART GRID IN-
 8 VESTMENTS, SMART GRID INFORMATION.—In
 9 the case”; and

10 (F) by adding at the end the following:

11 “(E) PLUG-IN ELECTRIC DRIVE VEHICLE
 12 PLANNING.—In the case of the standards estab-
 13 lished by paragraph (20) of section 111(d), the
 14 reference contained in this subsection to the
 15 date of enactment of this Act shall be deemed
 16 to be a reference to the date of enactment of
 17 that paragraph.”; and

18 (3) in section 112(d) (16 U.S.C. 2622(d)), in
 19 the matter preceding paragraph (1), by striking
 20 “(19)” and inserting “(20)”.

21 (b) REPORT.—

22 (1) IN GENERAL.—The Secretary, in consulta-
 23 tion with the Technical Advisory Committee, shall
 24 convene a group of utility stakeholders, charging in-
 25 frastructure providers, third party aggregators, and

1 others, as appropriate, to discuss and determine the
2 potential models for the technically and logistically
3 challenging issues involved in using electricity as a
4 fuel for vehicles, including—

5 (A) accommodation for billing for charging
6 a plug-in electric drive vehicle, both at home
7 and at publicly available charging infrastruc-
8 ture;

9 (B) plans for anticipating vehicle to grid
10 applications that will allow batteries in cars as
11 well as banks of batteries to be used for grid
12 storage, ancillary services provision, and backup
13 power; and

14 (C) integration of plug-in electric drive ve-
15 hicles with smart grid, including protocols and
16 standards, necessary equipment, and informa-
17 tion technology systems.

18 (2) REPORT.—Not later than 2 years after the
19 date of enactment of this Act and biennially there-
20 after, the Secretary shall submit to the appropriate
21 committees of Congress a report that includes—

22 (A) the issues and model solutions de-
23 scribed in paragraph (1); and

24 (B) any other issues that the Task Force
25 and Secretary determine to be appropriate.

1 **SEC. 302. LOAN GUARANTEES FOR ADVANCED BATTERY**
 2 **PURCHASES FOR USE IN STATIONARY APPLI-**
 3 **CATIONS.**

4 Subtitle B of title I of the Energy Independence and
 5 Security Act of 2007 (42 U.S.C. 17011 et seq.) is amend-
 6 ed by adding at the end the following:

7 **“SEC. 137. LOAN GUARANTEES FOR ADVANCED BATTERY**
 8 **PURCHASES.**

9 “(a) DEFINITIONS.—In this section:

10 “(1) QUALIFIED AUTOMOTIVE BATTERY.—The
 11 term ‘qualified automotive battery’ means a battery
 12 that—

13 “(A) has at least 4 kilowatt hours of bat-
 14 tery capacity; and

15 “(B) is designed for use in qualified plug-
 16 in electric drive motor vehicles but is purchased
 17 for nonautomotive applications.

18 “(2) ELIGIBLE ENTITY.—The term ‘eligible en-
 19 tity’ means—

20 “(A) an original equipment manufacturer;

21 “(B) an electric utility;

22 “(C) any provider of range extension infra-
 23 structure; or

24 “(D) any other qualified entity, as deter-
 25 mined by the Secretary.

26 “(b) LOAN GUARANTEES.—

1 “(1) IN GENERAL.—The Secretary shall guar-
 2 antee loans made to eligible entities for the aggre-
 3 gate purchase of not less than 200 qualified auto-
 4 motive batteries in a calendar year that have a total
 5 minimum power rating of 1 megawatt and use ad-
 6 vanced battery technology.

7 “(2) RESTRICTION.—As a condition of receiving
 8 a loan guarantee under this section, an entity pur-
 9 chasing qualified automotive batteries with loan
 10 funds guaranteed under this section shall comply
 11 with the provisions of the Buy American Act (41
 12 U.S.C. 10a et seq.).

13 “(c) REGULATIONS.—The Secretary shall promulgate
 14 such regulations as are necessary to carry out this section.

15 “(d) AUTHORIZATION OF APPROPRIATIONS.—There
 16 is authorized to be appropriated to carry out this section
 17 \$50,000,000.”.

18 **SEC. 303. PROHIBITION ON DISPOSING OF ADVANCED BAT-**
 19 **TERIES IN LANDFILLS.**

20 An advanced battery from a plug-in electric drive ve-
 21 hicle shall be disposed of in accordance with the Mercury-
 22 Containing and Rechargeable Battery Management Act
 23 (42 U.S.C. 14301 et seq.).

1 **SEC. 304. PLUG-IN ELECTRIC DRIVE VEHICLE TECHNICAL**
2 **ADVISORY COMMITTEE.**

3 (a) IN GENERAL.—There is established the Plug-in
4 Electric Drive Vehicle Technical Advisory Committee to
5 advise the Secretary on the programs and activities under
6 this Act.

7 (b) MISSION.—The mission of the Committee shall
8 be to advise the Secretary on technical matters, includ-
9 ing—

10 (1) the priorities for research and development;

11 (2) means of accelerating the deployment of
12 safe, economical, and efficient plug-in electric drive
13 vehicles for mass market adoption;

14 (3) the development and deployment of charg-
15 ing infrastructure;

16 (4) the development of uniform codes, stand-
17 ards, and safety protocols for plug-in electric drive
18 vehicles and charging infrastructure; and

19 (5) reporting on the competitiveness of the
20 United States in plug-in electric drive vehicle and in-
21 frastructure research, manufacturing, and deploy-
22 ment.

23 (c) MEMBERSHIP.—

24 (1) MEMBERS.—

1 (A) IN GENERAL.—The Committee shall
2 consist of not less than 12, but not more than
3 25, members.

4 (B) REPRESENTATION.—The Secretary
5 shall appoint the members to Committee from
6 among representatives of—

7 (i) domestic industry;

8 (ii) institutions of higher education;

9 (iii) professional societies;

10 (iv) Federal, State, and local govern-
11 mental agencies (including the National
12 Laboratories); and

13 (v) financial, transportation, labor, en-
14 vironmental, or other appropriate organiza-
15 tions or individuals with direct experience
16 in deploying and marketing plug-in electric
17 drive vehicles, as the Secretary determines
18 to be necessary.

19 (2) TERMS.—

20 (A) IN GENERAL.—The term of a Com-
21 mittee member shall not be longer than 3 years.

22 (B) STAGGERED TERMS.—The Secretary
23 may appoint members to the Committee for dif-
24 fering term lengths to ensure continuity in the
25 functioning of the Committee.

1 (C) REAPPOINTMENTS.—A member of the
2 Committee whose term is expiring may be re-
3 appointed.

4 (3) CHAIRPERSON.—The Committee shall have
5 a chairperson, who shall be elected by and from the
6 members.

7 (d) REVIEW.—The Committee shall review and make
8 recommendations to the Secretary on the implementation
9 of programs and activities under this Act.

10 (e) RESPONSE.—

11 (1) IN GENERAL.—The Secretary shall consider
12 and may adopt any recommendation of the Com-
13 mittee under subsection (c).

14 (2) BIENNIAL REPORT.—

15 (A) IN GENERAL.—Not later than 2 years
16 after the date of enactment of this Act and
17 every 2 years thereafter, the Secretary shall
18 submit to the appropriate committees of Con-
19 gress a report describing any new recommenda-
20 tions of the Committee.

21 (B) CONTENTS.—The report shall in-
22 clude—

23 (i) a description of the manner in
24 which the Secretary has implemented or

1 plans to implement the recommendations
2 of the Committee; or

3 (ii) an explanation of the reason that
4 a recommendation of the Committee has
5 not been implemented.

6 (C) TIMING.—The report described in this
7 paragraph shall be submitted by the Secretary
8 at the same time the President submits the
9 budget proposal for the Department of Energy
10 to Congress.

11 (f) COORDINATION.—The Committee shall hold joint
12 annual meetings with the Hydrogen and Fuel Cell Tech-
13 nical Advisory Committee established by section 807 of the
14 Energy Policy Act of 2005 (42 U.S.C. 16156) to help co-
15 ordinate the work and recommendations of the Commit-
16 tees.

17 (g) SUPPORT.—The Secretary shall provide to the
18 Committee the resources necessary to carry out this sec-
19 tion, as determined to be necessary by the Secretary.

20 **SEC. 305. PLUG-IN ELECTRIC DRIVE VEHICLE INTER-**
21 **AGENCY TASK FORCE.**

22 (a) IN GENERAL.—Not later than 120 days after the
23 date of enactment of this Act, the President shall establish
24 the Plug-in Electric Drive Vehicle Interagency Task

1 Force, to be chaired by the Secretary and which shall con-
2 sist of at least 1 representative from each of—

- 3 (1) the Office of Science and Technology Policy;
- 4 (2) the Council on Environmental Quality;
- 5 (3) the Department of Energy;
- 6 (4) the Department of Transportation;
- 7 (5) the Department of Defense;
- 8 (6) the Department of Commerce (including the
9 National Institute of Standards and Technology);
- 10 (7) the Environmental Protection Agency;
- 11 (8) the General Services Administration; and
- 12 (9) any other Federal agencies that the Presi-
13 dent determines to be appropriate.

14 (b) MISSION.—The mission of the Task Force shall
15 be to ensure awareness, coordination, and integration of
16 the activities of the Federal Government relating to plug-
17 in electric drive vehicles, including—

- 18 (1) plug-in electric drive vehicle research and
19 development (including necessary components);
- 20 (2) the development of widely accepted smart-
21 grid standards and protocols for charging infrastruc-
22 ture;
- 23 (3) the relationship of plug-in electric drive ve-
24 hicle charging practices to electric utility regulation;

1 (4) the relationship of plug-in electric drive ve-
2 hicle deployment to system reliability and security;

3 (5) the general deployment of plug-in electric
4 drive vehicles in the Federal, State, and local gov-
5 ernments and for private use;

6 (6) the development of uniform codes, stand-
7 ards, and safety protocols for plug-in electric drive
8 vehicles and charging infrastructure; and

9 (7) the alignment of international plug-in elec-
10 tric drive vehicle standards.

11 (c) ACTIVITIES.—

12 (1) IN GENERAL.—In carrying out this section,
13 the Task Force may—

14 (A) organize workshops and conferences;

15 (B) issue publications; and

16 (C) create databases.

17 (2) MANDATORY ACTIVITIES.—In carrying out
18 this section, the Task Force shall—

19 (A) foster the exchange of generic, non-
20 proprietary information and technology among
21 industry, academia, and the Federal Govern-
22 ment;

23 (B) integrate and disseminate technical
24 and other information made available as a re-

1 sult of the programs and activities under this
2 Act;

3 (C) support education about plug-in elec-
4 tric drive vehicles;

5 (D) monitor, analyze, and report on the ef-
6 fects of plug-in electric drive vehicle deployment
7 on the environment and public health, including
8 air emissions from vehicles and electricity gen-
9 erating units; and

10 (E) review and report on—

11 (i) opportunities to use Federal pro-
12 grams (including laws, regulations, and
13 guidelines) to promote the deployment of
14 plug-in electric drive vehicles; and

15 (ii) any barriers to the deployment of
16 plug-in electric drive vehicles, including
17 barriers that are attributable to Federal
18 programs (including laws, regulations, and
19 guidelines).

20 (d) AGENCY COOPERATION.—A Federal agency—

21 (1) shall cooperate with the Task Force; and

22 (2) provide, on request of the Task Force, ap-
23 propriate assistance in carrying out this section, in

- 1 accordance with applicable Federal laws (including
- 2 regulations).

